

REMARKS

The present application was filed on February 28, 2000, with claims 1-48. New claims 49-52 were added in a Preliminary Amendment filed by Applicants on June 16, 2000. In the present amendment, claims 14, 15, and 49-52 are canceled, and new claims 53 and 54 are added. Claims 1-13, 16-48, 53 and 54 are pending in the present application.

Applicants initially note that a number of the references relied upon by the Examiner in formulating the claim rejections do not constitute prior art relative to the present application.

With regard to claims 8-10 and 19-21, these claims are rejected under 35 U.S.C. §103(a) as being unpatentable over combinations of references which include U.S. Patent No. 6,301,440 (hereinafter "Bolle et al."). However, the Bolle et al. reference has an effective filing date of April 13, 2000, which is after the filing date of the present application. The Bolle et al. reference is therefore not prior art relative to the present application. The §103(a) rejections based on Bolle et al. are improper and should be withdrawn. ✓

With regard to claims 32-42, these claims are rejected under §103(a) as being unpatentable over combinations of references which include U.S. Patent No. 6,271,876 (hereinafter "McIntyre et al."). However, the McIntyre et al. reference issued on August 7, 2001, subsequent to the filing date of the present application. At the time the present invention was made, the subject matter of the McIntyre et al. reference and the claimed invention were owned by or subject to an obligation of assignment to the same person, namely, Eastman Kodak Company. Thus, in accordance with 35 U.S.C. §103(c), the McIntyre et al. reference is not prior art relative to the present application. The §103(a) rejections based on McIntyre et al. are improper and should be withdrawn. ✓

Applicants will now address the remaining claim rejections.

Claims 1-7 and 13 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,035,074 (hereinafter “Fujimoto et al.”). Applicants respectfully traverse.

The Manual of Patent Examining Procedure (MPEP), Eight Edition, August 2001, §2131, specifies that a given claim is anticipated “only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference,” citing Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Moreover, MPEP §2131 indicates that the cited reference must show the “identical invention . . . in as complete detail as is contained in the . . . claim,” citing Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Independent claims 1 and 13 are directed to digital cameras having particular sets of elements. The Examiner argues that external input section 16, face image recognition section 11-1 and other elements of the image processing apparatus in FIG. 3 of Fujimoto et al. meet the digital camera limitations of claims 1 and 13. However, the Fujimoto et al. reference clearly indicates that the elements relied upon by the Examiner are not part of a digital camera, but are instead part of an image processing apparatus that is separate and distinct from a digital camera. This is apparent from, for example, column 3, lines 58-62, and column 6, lines 5-8, of Fujimoto et al., wherein it is expressly stated that the image acquiring section of the image processing apparatus, that is, the external input section 16, may be “connected to an image inputting device such as a digital camera.” Thus, the elements of the image processing apparatus in FIG. 3 of Fujimoto et al. relied upon by the Examiner are not elements of a digital camera. Fujimoto et al. therefore not only fails to anticipate claims 1-7 and 13, but in fact actively teaches away from these claims by teaching an image processing apparatus that is clearly separate and distinct from a digital camera. ✓

Applicants also note with regard to claim 13 that this claim calls for a digital camera comprising an orientation algorithm for generating orientation data indicating orientation of an image based on the orientation of at least one face in the

image. The Examiner relies on the XY coordinate teachings in column 9, lines 46-50, of Fujimoto et al. as being allegedly anticipatory, but these teachings fail to meet the orientation algorithm limitation of the claim. Applicants have been unable to find any disclosure in Fujimoto et al. regarding determination of image orientation from face orientation.

Notwithstanding the traversal, Applicants have amended claim 1 to specify that the electronic processing section utilizes a face detection algorithm having a first component and a second component. The first component comprises a pre-screening pattern recognizer that searches for image windows likely to contain faces. The first component has a first rate of false positives and determines a plurality of face candidates. The second component comprises a posterior probability function classifier, which may be, for example, a maximum *a posteriori* classifier. The second component has a second rate of false positives lower than the first rate of false positives, and processes the plurality of face candidates to determine the presence of the one or more faces in the image. Support for the amendment can be found in the specification at, for example, page 7, lines 6-10, page 16, lines 15-22 and 30-32, page 20, lines 20-22, and page 21, lines 19-24. Such an arrangement is not shown in Fujimoto et al. or the other art of record.

Claims 49-52 are rejected under §102(e) as being anticipated by U.S. Patent No. 6,278,491 (hereinafter "Wang et al."). Applicants have canceled claims 49-52. The rejection is therefore moot, and should be withdrawn.

Claims 14 and 15 are rejected under §103(a) as being unpatentable over Fujimoto et al. in view of Wang et al. and Japan Publication JP403144427A (hereinafter "Nakamura et al."). Applicants have canceled claims 14 and 15. The rejection is therefore moot, and should be withdrawn.

Claims 16-18, 22, 23, 25, 26 and 43-48 are rejected under §103(a) as being unpatentable over Fujimoto et al. in view of Wu et al. "Face Detection from

Color Images Using a Fuzzy Pattern Matching Method,” IEEE Trans. Pattern Analysis and Machine Intelligence (hereinafter “Wu et al.”).

With regard to independent claims 16-18, each of these claims has been amended to include limitations similar to those added by the above-described amendment to claim 1, and the claims as amended are believed to be allowable.

With regard to independent claim 22, this claim has been amended to specify that the first component of the algorithm determines a plurality of face candidates utilizing a pattern matching technique that identifies image windows likely to contain faces based on color and shape information, and that the second component of the algorithm processes the plurality of face candidates using a maximum *a posteriori* classifier to determine the presence of the one or more faces in the image. Support for the amendment can be found in the specification at, for example, page 16, lines 15-22 and 30-32, page 17, lines 1-3, and page 21, lines 19-24. Such an arrangement is not taught or suggested by the proposed combination of Fujimoto et al. and Wu et al. Claims 23, 25 and 26 are believed allowable at least by virtue of their dependence from claim 22.

With regard to claims 43 and 46, these claims have been amended to include limitations similar to those of claim 22. Claims pairs 44, 45 and 47, 48 are believed allowable at least by virtue of their dependence from claims 43 and 46, respectively.

Claim 24 is rejected under §103(a) as being unpatentable over Fujimoto et al. in view of Wu et al. and Wang et al. This dependent claim is believed allowable at least by virtue of its dependence from claim 22.

Claims 11, 12 and 27-31 are rejected under §103(a) as being unpatentable over Fujimoto et al. in view of U.S. Patent No. 5,873,007 (hereinafter “Ferrada”). Applicants respectfully traverse the rejection. For reasons similar to those

provided above with regard to claim 1, the Fujimoto et al. reference does not disclose a digital camera having any of the elements set forth in independent claims 11 and 27. The image processing apparatus of FIG. 3 in Fujimoto et al. is described therein as being something that could be connected to a digital camera, but is clearly not itself a digital camera. See Fujimoto et al. at column 3, lines 58-62, and column 6, lines 5-8. Applicants submit that it would not be obvious to incorporate face detection elements of the image processing apparatus of FIG. 3 in Fujimoto et al. into a digital camera such as that described by Ferrada. This is because Fujimoto et al. expressly teaches away from such a modification by teaching an image processing apparatus that is described as being separate and distinct from a digital camera.

The Federal Circuit has stated that when patentability turns on the question of obviousness, the obviousness determination “must be based on objective evidence of record” and that “this precedent has been reinforced in myriad decisions, and cannot be dispensed with.” In re Sang-Su Lee, 277 F.3d 1338, 1343 (Fed. Cir. 2002). Moreover, the Federal Circuit has stated that “conclusory statements” by an examiner fail to adequately address the factual question of motivation, which is material to patentability and cannot be resolved “on subjective belief and unknown authority.” Id. at 1343-1344. There has been no showing in the §103(a) rejection of objective evidence of record that would motivate one skilled in the art to combine the Fujimoto et al. and Ferrada references to produce the particular limitations in question. Instead, the proposed combination appears to be based on a piecemeal reconstruction of the claimed invention, with the benefit of hindsight, rather than on any objective evidence of motivation. The statement of motivation provided by the Examiner at pages 11-12 of the Office Action is a subjective and conclusory statement of obviousness, and insufficient to support the proposed combination of the reference teachings.

Applicants further submit that, even if the Fujimoto et al. and Ferrada references were combinable, their combined teachings would fail to meet the claim limitations at issue. For example, with regard to independent claim 11, the combined

teachings fail to disclose or suggest a composition algorithm which operates on face data to generate composition suggestions. Similarly, with regard to independent claim 27, the combined teachings fail to meet the claim limitations regarding a composition algorithm which generates composition suggestions based on deviation of face data from predetermined composition principles.

Notwithstanding the traversal, Applicants have amended independent claim 11 to clarify that the composition algorithm generates composition suggestions for a user of the digital camera in response to processed face data.

Dependent claims 12 and 28-31 are believed allowable at least by virtual of their dependence from claim 11 or claim 27.

In view of the foregoing, it is believed that the claims in the application are allowable over the prior art and such allowance is respectfully requested.

The Commissioner is hereby authorized to charge any fees in connection with this communication to Eastman Kodak Company Deposit Account No. 05-0225.

A duplicate copy of this communication is enclosed.

Respectfully submitted,



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